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ABSTRACT

An investigation of the relationship between communication apprehension (CA) and the attainment of media competencies employs the first null hypothesis that there would be no significant difference in the achievement of media competencies and the second null hypothesis that there would be no significant correlations between the attainment of media competency and the projected future use of ten common classroom media. Subjects were enrolled in the winter 1979 semester of a basic media course at the University of Missouri, Columbia. The experiment was conducted over an 8-week period and involved only production skills. In testing the first null hypothesis, eight tasks were designed to develop production skills in picture mounting, lettering, illustration, and design. In testing the second null hypothesis, the composite scores from the Media Production Skill Scale (MPSS) and the averages from the Media Utilization scale were correlated using the Spearman rank coefficient. The first null hypothesis was rejected in three of the eight competencies: squared reduction, projected enlargement, and hand lettering. The second null hypothesis was accepted. (MER)

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THE RELATIONSHIP OF COMMUNICATION APPREHENSION LEVEL AND MEDIA COMPETENCY

A Paper

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Introduction

The identification of variables which determine users and nonusers of media in the classroom is important to media educators because decisions must be made as to the best methods for persuading nonusers to make media an integral part of their instruction. There have been numerous studies which have attempted to isolate utilization variables, however, the findings are frequently contradictory. The variables studied have included: grade level, subject taught, media training, media competency, barriers to utilization, attitudes toward media, sex, teaching experience, mechanical ability, and personality traits.

Recently, Dunathan and Powers (1979) linked the personality trait of communication apprehension (CA) to past and projected future use of media among preservice teachers. Communication apprehension is generally defined as a fear of oral communication. This trait can have a negative impact upon a person's life. Research indicates that a person with high CA is viewed less positively by teachers, employers, and peers (McCroskey, 1977). A person with high CA will seek to avoid any type of communication activity. Dunathan and Powers conclude that this avoidance can be expanded to

include technologically based communication as well.

In their study, Dunathan and Powers asked beginning education majors enrolled in a required introduction to education course to indicate on a 10-point scale (see appendix) their past and projected future use of ten instructional media: motion pictures, television, overhead, audio, slides, filmstrips, models, games and charts. Students were also given McCroskey's Personal Report on Communication Apprehension (PRCA, 1970,see appendix). The researchers concluded that high and moderate CA individuals tend to group together in their past and projected future media use. These two groups, which made up 85% of the sample, reported significantly less media use than the low CA group. This finding was repeated in another Powers and Dunathan study (1979) that was conducted with ending education majors. Thus, communication apprehension appears to be a possible factor in media utilization.

As of yet no specific media competencies have been empirically related to media use. However, most experts would agree that general competency in media requires knowledge in selection, utilization, production, equipment operation, and evaluation of media (Fulton, 1960; Meierhenry,1966; Pascoe, 1957;White, 1953). In addition, teachers, administrators, and media educators feel that knowledge of production skills and training in other aspects of media are important in teacher education (Brookens, 1970; Busse, 1976; Ford, 1974; Haselwood, 1972; Kennard, 1973; King, 1967; Meierhenry, 1967; Mars and Bergeson, 1970; Romano and Speiker, 1974; and Salley, 1965)

Streeter (1969) is the only study which has successfully related media competency to media utilization. Using Meierhenry's competencies (1966), Streeter questioned teachers and found a pos-

itive correlation of .41 between media competency and frequency of use. Twelve of the competencies were identified as potential influencing factors in media utilization. Only five of these were possessed by the teachers and yet two-thirds of them had received media training. This may indicate that training in media is not neccessarily related to media competency.

Purpose of the Study

From the literature, it is possible to suggest that media competency can be correlated with media utilization. It is also possible to suggest that CA is an indication of media utilization. What then is the relationship between CA level and media utilization? The purpose of this study was to investigate the relationship between CA level and the attainment of media competencies which are fundamental to the production of basic media, and the relationship between the attainment of competency and the future use of media among preservice teachers. The first null hypothesis was that there would be no significant differences in the achievement of media competencies among the three levels of CA subjects. The second null hypothesis was that there would be no significant correlation between the attainment of media competency and the projected future use of ten common classroom media.

Methods and Procedures

A quasi-experimental design was used because the subjects were an intact group who were enrolled in the Winter 1979 semester of a basic media course at the University of Missouri-Columbia. The experiment was conducted over an eight week period and involved only production skills. At the beginning of the course ninty-two

subjects were tested for CA level, using the PRCA and asked to indicate their plans for the use of media on Dunathan's and Powers' Media Utilization Scale.

The PRCA is a self-report instrument which delineates individuals who are high, moderate, and low CA. High CA indicates an individual who is fearful of communicative encounters. According to McCroskey's(1977) standard procedures, a score which falls one standard deviation above the mean indicates a high CA person. A moderate CA individual is one who exhibits some disomfort in communicative encounters. A PRCA score which falls ± one standard deviation from the mean indicates a moderate CA. Low CA is represented by a person who is quite comfortable in communicative encouters. A score which falls more than one standard deviation below the mean indicates a low CA individual. The data collected are reported in Table 1.

TABLE 1

PRCA RESULTS

Level of CA	Number of Students	Range of Scores
Low CA	13	33 - 56.21
Moderate CA	64	56.22 - 83.78
High CA	15	83.79 - 113

N = 92 Mean = 70 Standard deviation = 13.78

In testing the first null hypothesis eight tasks were designed to develop production skills in picture mounting, lettering, illustration, and design. These were evaluated by three qualified judges using the researcher's Media Production Skill Scale (MPSS, see appendix) which rates each task according to specific criteria on a

5-point scale. The data was analyzed using a Krusal-Wallis one way analysis of variance. In testing the second null hypothesis the composite scores from the MPSS and the averages from the Media Utilization Scale were correlated using the Spearman rank coefficient. The level of significance was set at .05.

Findings

In testing the first hypothesis the .05 level of significance had an H value of 5.99 with two degrees of freedom. The null hypothesis was rejected in three of the tasks. CA level was significantly related to the competencies of squared reduction, projected enlargement, and hand lettering. The H value for squared reduction (18.74) was significant at the .005 level. The H value for projected enlargement (10.76) was significant at the .01 level. The H value for hand lettering(6.86) was significant at the .05 level. Commercial lettering (H=-4.82) approached the .05 level of significance indicating a possible relationship between CA and this Particular media competency. CA level was not significantly related to the competencies of dry mounting, rubber cement mounting, mechanical lettering, and design. In all but two tasks (mechanical lettering and dry mounting) the low CA group produced the lowest mean rank. The data are reported in Table 2.

The second null hypothesis was accepted. The reults of the Spearman rank coefficient are reported in Table 3. A correlation coefficient of -.0725 was obtained. The t value of .61 was not significant at the .05 level (t=2.00) with 71 degrees of freedom.

TABLE 2

RELATIONSHIP OF CA LEVEL TO MEDIA COMPETENCY

Assignment	Rank Means			H value
	Low	Moderate	High	
Squared Reduction	38.00	44.20	50.82	18.74***
Projected Enlargement	27.92	45.86	42.96	10.86**
Dry Mounting	43.00	46.68	38.11	-0.60
Rubber Cement Mounting	34.79	48.32	36.78	-1.22
Commercial Lettering	35.86	42.06	45.75	-4.82
Mechanical Lettering	39.96	44.15	33.46	-1.06
Hand Lettering	35.45	41.29	41.33	6.86*
Design and Composition	35.55	42.62	38.46	0.026

*significant at the .05 level
**significant at the .01 level
***significant at the .005 level

TABLE 3

RELATIONSHIP OF PROJECTED MEDIA UTILIZATION TO MEDIA COMPETENCY

$r_s = -.0725$	N = 73
t = .61	df = 71

Not significant at the .05 level

Discussion

In analyzing the data two patterns emerged: (1) the low CA groups received the lowest scores on a majority of the tasks; and (2) the type of task which produced significant results required good eye-hand coordination. The high and moderate CA groups excelled in the tasks of squared reduction, projected enlargement, and hand lettering, however, when the task required the use of mechanical or commercial devices, there was no significant differences among the groups.

A possible explanation for these findings may be found in the literature on CA. McCroskey (1977) has found low CA individuals to be less anxious and more easy going. This may have affected their approach in attempting these visual tasks. The approach may have been one of "winging it", resulting in lower scores. The high CA individual is more anxious, more task oriented and therefore, may have taken the visual tasks more seriously, resulting in higher scores.

The low scoring on the part of the low CA group is not typical of their academic performance. Research has documented that the low CA individual maintains a higher grade point average than the high CA individual (McCroskey and Anderson, 1976). Another possible explanation is that, because the high CA person is less capable and less comfortable in dealing with oral communication, the high CA individual may actually excell in visual skills. The reverse being the case for the low CA individual. This study's findings indicate that the low CA group may have some visual handicap which can be overcome when mechanical devices are used. These findings also indicate that the high and moderate CA individuals have some natural

visual ability.

The findings of no significant correlation between media competency and media utilization in testing the second hypothesis is consistent with the findings of the first hypothesis. If competency in production skill was related to media utilization, it would have been logical to expect the low CA group to obtain higher scores and greater media competency, however, the reverse proved to be true.

Questions still remain: if the high and moderate CA groups have the competency to produce media, why do they choose not to use it and why is the reverse true for the low CA group? The answer may lie in the way media is perceived. If media is viewed as being an extension of verbal communication rather than visual communication, it is logical that the low CA individual would use media and the high CA individual would not. The findings of this study may have some implications for the media educator. If CA is related to media utilization and media competency is not, then the treatment of communication apprehension becomes an important tool in encouraging teachers to use media. Media production training is also important, but if it cannot guarantee media utilization then it is time to look for other methods which will.

Summary

Again, the purpose of this study was to investigate the relationship of communication apprehension level and media competency, and the relationship between attainment of media competency and future media utilization. The first null hypothesis that there would not be a significant difference in the achievement of media competencies fundamental to the production of media

among the three levels of communication apprehension was rejected in three of the eight competencies. These were squared reduction, projected enlargement, and hand lettering. The second null hypothesis that the attainment of these media competencies would not correlate with projected future use of ten common classroom media was accepted.

APPENDIX

PERSONAL REPORT ON COMMUNICATION APPREHENSION

DIRECTIONS: This instrument is composed of 25 statements concerning your communication with other people. Please indicate the degree to which each statement applies to you by marking whether you: 1) Strongly Agree, 2) Agree, 3) Are Undecided, 4) Disagree, or 5) Strongly Disagree with each statement. There are no right or wrong answers. Work quickly, just record your first impression.

1. While participating in a conversation with a new acquaintance I feel very nervous.
2. I have no fear of facing an audience.
3. I talk less bacause I'm shy.
4. I look forward to expressing my opinions at meetings.
5. I am afraid to express myself in a group.
6. I look forward to an opportunity to speak in public.
7. I find the prospect of speaking mildly pleasant.
8. When communicating, my posture feels strained and unnatural.
9. I am tense and nervous while participating in group discussions.
10. Although I talk fluently with friends, I am at a loss for words on the platform.
11. I have no fear about expressing myself in a group.
12. My hands tremble when I handle objects on the platform.
13. I always avoid speaking in public if possible.
14. I feel that I am more fluent when talking to people than most other people are.
15. I am fearful and tense all the while I am speaking before a group of people.
16. My thoughts become confused and jumbled when I speak before an audience.
17. I like to get involved in group discussions.
18. Although I am nervous just before getting up, I soon forget my fears and enjoy the experience.
19. Conversing with people who hold positions of authority causes me to be fearful and tense.
20. I dislike to use my body and voice expressively.
21. I feel relaxed and comfortable while speaking.
22. I feel self-conscious when I am called upon to answer a question or give an opinion in class.
23. I face the prospect of making a speech with complete confidence.
24. I'm afraid to speak up in conversations.
25. I would enjoy presenting a speech on a local television show.

To compute the PRCA score, follow these three steps:

1. Add the scores for items 1, 3, 5, 8, 9, 10, 12, 13, 15, 16, 19, 20, 22, and 24.
2. Add the scores for items 2, 4, 6, 7, 11, 14, 17, 18, 21, 23 and 25.
3. Complete the following formula:
   PRCA = 84 - (total from step 1) + (total from step 2)

MEDIA UTILIZATION SCALE

ON THE FOLLOWING ITEMS PLEASE BLACKEN THE CORRESPONDING NUMBER REPRESENTING YOUR REACTION TO EACH ITEM.

To what extent do you plan to use the following instructional media in your own teaching?

26. Motion Pictures
Not at all 0 1 2 3 4 5 6 7 8 9 Extremely often

27. Television
Not at all 0 1 2 3 4 5 6 7 8 9 Extremely often

28. Overhead Projection Transparencies
Not at all 0 1 2 3 4 5 6 7 8 9 Extremely often

29. Audio Tape Recordings, Records, or Radio
Not at all 0 1 2 3 4 5 6 7 8 9 Extremely often

30. Slide Programs
Not at all 0 1 2 3 4 5 6 7 8 9 Extremely often

31. Filmstrips
Not at all 0 1 2 3 4 5 6 7 8 9 Extremely often

32. Models or Specimens
Not at all 0 1 2 3 4 5 6 7 8 9 Extremely often

33. Games
Not at all 0 1 2 3 4 5 6 7 8 9 Extremely often

34. Charts, Graphs, Posters, Bulletin Boards
Not at all 0 1 2 3 4 5 6 7 8 9 Extremely often

35. Chalkboard
Not at all 0 1 2 3 4 5 6 7 8 9 Extremely often

MEDIA PRODUCTION SKILL SCALE (MPSS)

Ratings: 1)Very poor, 2)poor, 3)fair, 4)good, 5)very good.

Dry Mount

Task: To mount a visual on a 11 x 14 inch piece of illustration board using dry mount tissue.

Criteria:					
Placement of visual on board	1	2	3	4	5
Trimming of visual	1	2	3	4	5
Dry mount tissue visible from edges of visual	1	2	3	4	5
Bubbles and creases	1	2	3	4	5
Permanency of mount	1	2	3	4	5
Dirt on board and visual	1	2	3	4	5
Overall appearance	1	2	3	4	5

Rubber Cement Mount

Task: To mount a visual on a 11 x 14 inch piece of illustration board using the permanent rubber cement technique.

Criteria:					
Placement of visual on board	1	2	3	4	5
Rubber cement blemishes	1	2	3	4	5
Rubber cement left on margins and surface of visual	1	2	3	4	5
Dirt or foreign matter under visual or on mount board	1	2	3	4	5
Trimming of visual	1	2	3	4	5
Tightness of adhesion	1	2	3	4	5
Overall appearance	1	2	3	4	5

Commercial Lettering

Task: To letter a set of given words so that the letters are properly spaced using dry transfer letters.

Criteria:					
Letter alignment	1	2	3	4	5
Neatness of letters	1	2	3	4	5
Line spacing	1	2	3	4	5
Word spacing	1	2	3	4	5
Overall appearance	1	2	3	4	5

Mechanical Lettering

Task: To letter a set of given words so that the letters are properly spaced using a letter guide and pen or brush.

Criteria:					
Letter alignment	1	2	3	4	5
Neatness of letters	1	2	3	4	5
Spacing between letters	1	2	3	4	5
Smoothness of ink	1	2	3	4	5
Line spacing	1	2	3	4	5
Overall appearance	1	2	3	4	5

Hand Lettering

Task: To letter a given phrase so that the letters are properly spaced using the speedball pen technique.

Criteria:					
Letter alignment	1	2	3	4	5
Neatness of letters	1	2	3	4	5
Letter spacing	1	2	3	4	5
Word spacing	1	2	3	4	5
Line spacing	1	2	3	4	5
Smoothness of ink	1	2	3	4	5
Overall appearance	1	2	3	4	5

Illustration - Squared Reduction

Task: To reduce a given illustration using the squared reduction method. A finished pen and ink drawing is required.

Criteria:					
Accuracy of reduction	1	2	3	4	5
Smoothness of line	1	2	3	4	5
Finished appearance	1	2	3	4	5

Illustration - Projected Enlargement

Task: To enlarge a given illustration using the opaque projector. A finished pen and ink drawing is required.

Criteria:					
Accuracy of enlargement	1	2	3	4	5
Smoothness of line	1	2	3	4	5
Finished appearance	1	2	3	4	5

Display

Task: To create a bulletin board display no smaller than 20 x 32 inches which is directed toward a learning objective and a particular audience.

Criteria:

Content					
Does the content suit the audience	1	2	3	4	5
Does the content suit the objective	1	2	3	4	5
Is material logical and understandable	1	2	3	4	5
Free of irrelevant material	1	2	3	4	5
Design					
Durability of materials	1	2	3	4	5
Originality of design	1	2	3	4	5
Neatness of design	1	2	3	4	5
Simple without jeopardizing components	1	2	3	4	5
Is the design balanced	1	2	3	4	5
Is the massage or central theme emphasized	1	2	3	4	5
Is there sufficient contrast	1	2	3	4	5
Is the design harmonious	1	2	3	4	5
Is the design unified	1	2	3	4	5
Is there too much or too little negative space	1	2	3	4	5
Do the verbal messages support the visual statemnt	1	2	3	4	5
Is the lettering size and style appropriate	1	2	3	4	5
Is the lettering legible (spacing & contrast)	1	2	3	4	5
Are the illustrations executed well	1	2	3	4	5
Are the mounting techniques smooth and straight	1	2	3	4	5
Overall appearance	1	2	3	4	5

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